Letters to the Editors

Concordance is not synonymous with compliance or adherence

J. Simon Bell, Marja S. Airaksinen, Alan Lyles,¹ Timothy F. Chen² & Parisa Aslani²

Faculty of Pharmacy, University of Helsinki, Helsinki, Finland, ¹University of Baltimore, Baltimore, MD, USA and ²Faculty of Pharmacy, University of Sydney, NSW, Australia

Hippocrates described the importance of patient compliance over 2000 years ago, but the issue continues to generate intense debate [1]. Dictionary definitions often disregard the evolution of language, but definitions in science and medicine are constantly changing. New and modified terminology is needed to capture and communicate emerging ideas, practices and discoveries. The issue of compliance, adherence and concordance is a case in point.

Concordance is not synonymous with either compliance or adherence. Concordance does not refer to a patient's medicine-taking behaviour, but rather the nature of the interaction between clinician and patient. It is based on the notion that consultations between clinicians and patients are a negotiation between equals [2]. How individual patients value the risks and benefits of a particular medicine may differ from the value assigned by their clinicians [3]. In adopting a concordant approach clinicians should respect the rights of patients to decide whether or not to take prescribed medicines. The aim of concordance is the establishment of a therapeutic alliance between the clinician and patient. Concordance is synonymous with patient-centred care. Nonconcordance may occur if a therapeutic partnership is not established and therefore may denote failure of the interaction.

In contrast, compliance and adherence relate to the medicine-taking behaviour of the patient. Compliance and adherence can be estimated using prescription claims records, pharmacy dispensing data, validated survey instruments or electric pill counters, as well as direct measures such as serum drug levels [4]. However, concordance can not. There are still no accepted, valid and reliable tools to measure concordance. While Aronson correctly points to the lack of evidence for

improved health outcomes following concordant interactions, research suggests many patients do wish to be involved in decision making about their own treatment regimens [5]. This is particularly true in the field of psychiatry, where many patients may receive only minimal information about their prescribed medicines [6, 7], but may also apply to patients receiving long-term therapy for somatic diseases [8].

Just like Hippocrates, most clinicians recognize the importance of good adherence. In the case of the 81-year-old lady with worsening heart failure, the author attributed non-adherence to the 'very simple' cause of morning diuresis. However, understanding the reasons for non-adherence is not always so simple. Patientrelated reasons for non-adherence may include forgetfulness, the decision to omit doses, lack of information and emotional factors [4]. Clinician-related reasons may include prescription of complex regimens, failing to explain the benefits and side-effects of treatment, not giving consideration to a patient's lifestyle or the cost of medicines, and having a poor therapeutic relationship with the patient. Most traditional methods of assessing medicine taking do so quantitatively, and provide little insight into the reasons for non-adherence. These methods may lead clinicians to attribute non-adherence to patient-related reasons. Greater use of qualitative research techniques may reveal that the reasons for nonadherence also lie in the way clinicians work and the healthcare system operates. Use of a concordant approach in clinical practice may be one mechanism by which non-adherence can be better understood and addressed.

References

- 1 Aronson JK. Compliance, concordance, adherence. Br J Clin Pharmacol 2007; 63: 383–4.
- 2 Royal Pharmaceutical Society of Great Britain and Merck Sharpe and Dohme. Partnership in Medicine Taking: A Consultative Document. London: Royal Pharmaceutical Society of Great Britain and Merck Sharpe and Dohme 1996.
- **3** Alaszewski A. A person-centred approach to communicating risk. PLoS Med 2005; 2: e41.

- 4 Osterberg L, Blaschke T. Adherence to medication. N Engl J Med 2005; 353: 487-97.
- 5 Hamann J, Cohen R, Leucht S, Busch R, Kissling W. Do patients with schizophrenia wish to be involved in decision about their medical treatment? Am J Psychiatry 2005: 162: 2382-4.
- 6 Garfield S, Francis S-A, Smith FJ. Building concordant relationships with patients starting antidepressant medication. Patient Educ Couns 2004: 55: 241-6.
- 7 Olofinjana B, Taylor D. Antipsychotic drugs information and choice: a patient survey. Psychiatr Bull 2005; 29: 369-71.
- 8 World Health Organization. Adherence to Long-Term Therapies: Evidence for Action. Geneva: WHO 2003.

Received

10 April 2007

Accepted

13 April 2007

Published OnlineEarly

15 September 2007

Correspondence

J. Simon Bell, PhD, Senior Lecturer, Faculty of Pharmacy, University of Helsinki, Helsinki, Finland. E-mail: simon.bell@helsinki.fi

Time to abandon the term 'patient concordance'

J. K. Aronson

Department of Primary Health Care, University of Oxford, Oxford, UK

Originally, the definition of concordance 'impl[ied] that the prescriber and patient should come to an agreement about the regimen that the patient will take', as I wrote in my recent editorial [1]. I also pointed out that compliance can mean 'Accord, concord, agreement; amicable relations (between parties)', which seems to me to be in concord with this definition of concordance. This may partly explain the confusion between these terms, reflected in the titles of some publications, in which 'concordance' is used as a synonym for 'compliance' or 'adherence' [2-4].

In fact, the definition of concordance has shifted since it was first invented. The original definition was 'an agreement reached after negotiation between a patient and a health care professional that respects the beliefs and wishes of the patient in determining whether, when and how medicines are to be taken' [5]. However, as I argue below, a negotiated agreement is not relevant to the interaction between a clinician and a patient, and the focus of concordance has therefore shifted from the consultation to how to communicate with and support the patient [5], which are relevant.

Bell et al. also suggest that a consultation between a clinician and a patient is a negotiation [6]. It is not, as those who regularly treat patients know.

A 55-year-old man suddenly develops crushing retrosternal chest pain while mowing his lawn. The pain radiates to his neck and jaw and down his left arm. He has tingling in the fingers of his left hand and a feeling of impending doom. An electrocardiogram shows widespread ST segment elevation in the anterior leads, with Q waves and T wave inversion, and his serum troponin concentration is markedly raised. I tell him that he has had a heart attack and explain why I have reached that conclusion and how it has probably happened. There is no negotiation. The diagnosis is definitive - take it or leave it. If he does not accept the diagnosis he can, if he wants, consult another clinician. But whether he agrees or not, he has had a heart attack. Had the diagnosis been less clear, doubts could have been discussed and further investigations suggested, but there would still be no negotiation. He can refuse further investigations if he prefers, but no amount of agreement or disagreement will alter the circumstances.

Now I suggest to him that thrombolytic therapy is likely to be beneficial, since there is good evidence that he will benefit from such treatment and that the potential benefit will outweigh the potential harm. Again there is no negotiation. He can refuse the treatment, but he cannot, for example, negotiate for a delay while he goes home to finish some work, or for treatment with only half the recommended dose, or for a tablet instead of an injection. I have a responsibility to tell him about the benefits and harms and the balance between them, couching my explanations in terms that he will understand, and giving him the opportunity to ask questions. His responsibility is to decide whether the treatment is acceptable to him and to tell me in good time (since the longer he waits the less effective the treatment will be). If he accepts the treatment I have the further responsibility to administer it properly, to monitor its effects and to take further necessary actions, explaining each step. In a discussion with him about resuscitation in the event of a cardiac arrest I would follow his wishes; in that case the position is reversed – I would not want to negotiate otherwise.

A search of Pubmed for papers whose titles include the word 'concordance' yields about 1300 results, well over 95% of which are nothing to do with agreement between clinicians and patients. They use the term in the sense of correspondence. For example 'physician and patient gender concordance' means that the physician and patient are of the same sex [7]. Similarly, 'patientphysician racial and ethnic concordance' means that they are of the same race or ethnic origin [8]. 'Language concordance' is the use and understanding of the same language [9]. In all these and other cases [10–12] the correspondence is perfect. However, clinicians' views about therapy can never be perfectly concordant with those of patients. As Bell et al. put it, 'How individual patients value the risks and benefits of a particular medicine may differ from the value assigned by their clinicians' [6]; indeed, such a difference generally occurs. The best that can be hoped for is that the clinician explains clearly and advises appropriately and the patient decides whether to accept the advice and to adhere to the proffered therapy, with suitable support from the clinician, or to reject the advice, either outright or by subsequent non-adherence (adherence not always being beneficial).

Concordance has become a shibboleth that has been accepted uncritically in certain quarters in the absence of evidence of its benefits and harms and of the balance between them. Authors do not write about testing the concept of concordance. They write about achieving concordance [13], promoting it [14], improving it [15], enhancing it [4], even when they admit at the same time that supportive evidence of benefit is rare [13] and although doubts about its benefits have been expressed and possible harms mentioned [16].

What evidence there is, is limited. Take 'concordance therapy', for example. A search of Pubmed for the term yields four references, of which three are interventional studies:

- in the management of akathisia mental health nurses can, it is suggested, 'safely prescribe psychiatric medication in combination with concordance therapy' [17]
- in 19 patients, for whom antidepressants had been prescribed, concordance therapy was said to be 'acceptable and feasible' and the authors concluded that it 'show[ed] sufficient promise of efficacy to justify an adequately powered R[andomized] C[ontrolled] T[rial]' [18]
- in 10 subjects with bipolar I disorder, of whom eight had concordance therapy, there were small improvements in attitudes towards lithium and in self-reported adherence [19].

There is no evidence on the possible harms of such therapies. Some of the types of research on concordance that are desirable have been mentioned in a thoughtful review [5], and the National Institute for Health and Clinical Excellence in the UK is conducting a critical appraisal of the evidence on shared decision making, although the report is not expected until December 2008 [20].

Not all patients want to be more involved in decisions about their management. In a study of 344 patients with rheumatoid arthritis, 78% thought that patients should feel free to make everyday decisions about medical problems, but 75% thought that doctors should make important decisions and >50% thought that patients should go along with doctors' decisions even if they disagreed with them [21]. On the other hand, many patients want more information - in the same study, significantly more patients wanted information than wanted to be involved in making decisions. However, up to 80% of information given to patients during medical consultations is forgotten at once, and almost half of what is remembered is remembered incorrectly [22]; measures to improve this would be welcome. More education of clinicians in the practical aspects of prescribing is also desirable [23].

The word of choice to describe a patient's medicine-taking behaviour is 'adherence' [5]. The word 'concordance', when used to imply a negotiated agreement between prescriber and patient, is misleading and inaccurate. It was invented with excellent intentions [24] but has failed to live up to expectations. We should ditch it and talk instead about what really matters to patients in their conversations with health care professionals – the quality of communication and support that they receive.

References

- 1 Aronson JK. Compliance, concordance, adherence. Br J Clin Pharmacol 2007; 63: 383–4.
- 2 Newell K. Concordance with asthma medication: the nurse's role. Nurs Stand 2006; 20: 31–3.
- **3** Badger F, Nolan P. Concordance with antidepressant medication in primary care. Nurs Stand 2006; 20: 35–40.
- **4** Banning M. Enhancing older people's concordance with taking their medication. Br J Nurs 2004; 13: 669–74.
- 5 Horne R, Weinman J, Barber N, Elliott R, Morgan M. Concordance, Adherence and Compliance in Medicine Taking. Report for the National Coordinating Centre for NHS Service Delivery and Organization R & D (NCCSDO). Available at http://www.sdo.lshtm.ac.uk/files/project/76-final-report.pdf Last accessed 17 April 2007.
- **6** Bell JS, Airaksinen MS, Lyles A, Chen TF, Aslani P. Concordance is not synonymous with compliance or adherence. Br J Clin Pharmacol 2007; Epub ahead of print. doi: 10.1111/j.1365-2125.2007.02971.x.
- 7 Schmittdiel J, Grumbach K, Selby JV, Quesenberry CP Jr. Effect of physician and patient gender concordance on patient satisfaction and preventive care practices. J Gen Intern Med 2000; 15: 761–9.
- 8 Stepanikova I. Patient–physician racial and ethnic concordance and perceived medical errors. Soc Sci Med 2006; 63: 3060–6.

- 9 Manson A. Language concordance as a determinant of patient compliance and emergency room use in patients with asthma. Med Care 1988; 26: 1119–28.
- 10 Kurtz ME, Kurtz JC, Given CC, Given B. Concordance of cancer patient and caregiver symptom reports. Cancer Pract 1996; 4: 185–90.
- 11 Mikkelsen G, Aasly J. Concordance of information in parallel electronic and paper based patient records. Int J Med Inform 2001; 63: 123–31.
- 12 Vinyoles E, Blancafort X, Lopez-Quinones C, Arque M, Brau A, Cerdan N, de la Figuera M, Diaz F, Pujol E. Blood pressure measurement in an ambulatory setting: concordance between physician and patient self-measurement. J Hum Hypertens 2003; 17: 45–50.
- 13 Lim AY, Ellis C, Brooksby A, Gaffney K. Patient satisfaction with rheumatology practitioner clinics: can we achieve concordance by meeting patients' information needs and encouraging participatory decision making? Ann Acad Med Singapore 2007; 36: 110–5.
- 14 Hobden A. Strategies to promote concordance within consultations. Br J Community Nurs 2006; 11: 286–9.
- 15 Brooks J, Ersser SJ, Lloyd A, Ryan TJ. Nurse-led education sets out to improve patient concordance and prevent recurrence of leg ulcers. J Wound Care 2004; 13: 111–6.
- 16 Ferner RE. Is concordance the primrose path to health? It might not make much difference. BMJ 2003; 327: 821–2.
- 17 Jones M, Bennett J, Gray R, Arya P, Lucas B. Pharmacological management of akathisia in combination with psychological interventions by a mental health nurse consultant. J Psychiatr Ment Health Nurs 2006; 13: 26–32.
- 18 Higgins N, Livingston G, Katona C. Concordance therapy: an

- intervention to help older people take antidepressants. J Affect Disord 2004; 81: 287–91.
- 19 Scott J, Tacchi MJ. A pilot study of concordance therapy for individuals with bipolar disorders who are non-adherent with lithium prophylaxis. Bipolar Disord 2002; 4: 386–92.
- 20 National Institute for Health and Clinical Excellence. Medicines Concordance (Involving Patients in Decisions About Prescribed Medicines). Available at http://guidance.nice.org.uk/page.aspx?o=267072 (last accessed: 17 April 2007).
- 21 Neame R, Hammond A, Deighton C. Need for information and for involvement in decision making among patients with rheumatoid arthritis: a questionnaire survey. Arthritis Care Res 2005; 53: 249–55.
- 22 Kessels RPC. Patients' memory for medical information. J R Soc Med 2003; 96: 219–22.
- 23 Aronson JK. A prescription for better prescribing. Br J Clin Pharmacol 2006; 61: 487–91.
- 24 Marinker M. Personal paper: writing prescriptions is easy. BMJ 1997; 314: 747.

Received

18 April 2007

Accepted

18 April 2007

Published OnlineEarly

15 September 2007

Correspondence

J. K. Aronson, University Department of Primary Health Care, Rosemary Rue Building, Old Road Campus, Roosevelt Drive, Headington, Oxford OX3 7LF, UK. E-mail: jeffrey.aronson@clinpharm.ox.ac.uk